The Gymnasium: Renaissance

Coordination, Utility, and the Builders of Culture

Jason Halory | December 25, 2025

"For the many artists"

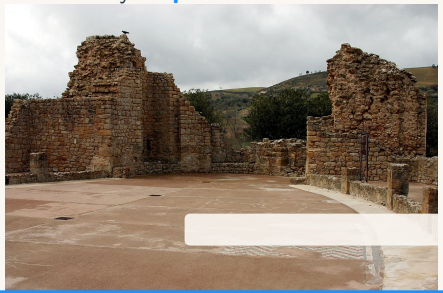
school_of_athens.jpg

Raphael (image) [1].

The Classical Gymnasium

> *"Socrates may go to the gymnasium to collect his disciples, but he goes there to drag them away from it and to submit them to the hard discipline of mathematics and dialectics."*
>
> — *Henri-Irénée Marrou*

- A shift from **warrior** culture toward **scribe** culture (discipline, literacy, method).
- Education of the whole person: moral formation and *kalokagathos* ("beautiful and good").
- The gymnasium evolves from "naked exercise" into a civic center for intellectual and artistic education.
- Today: a **public interface** for disciplined exchange.



[2, 3]

Definition: Renaissance

> *"The Renaissance was not merely a revival of antiquity, but the discovery of the world and of man."*
>
> — *Jacob Burckhardt*

- Not nostalgia: a **structural reorganization** of craft and knowledge.
- Discovery of **the world**: measurement, mapping, infrastructure, new tools.
- Discovery of **the human**: agency, dignity, discipline, and self-knowledge in an age.

[4]

Definition: Architecture (Utility)

"The architect should be equipped with knowledge of many branches of study and varied kinds of learning."

— *Vitruvius*

"May the Architect be high-minded; not arrogant, but faithful; just; and free of avarice."

— *Vitruvius*

- Built space is a social contract made visible.
- **Utilitas** (Utility) anchors strength and beauty.

[5]

Human Systems Integration (HSI)

> *"HSI integrates human considerations across system design to optimize total system performance and minimize life-cycle cost."*
>
> — *U.S. Department of Defense (HSI policy)*

See also: INCOSE handbook (systems practice).

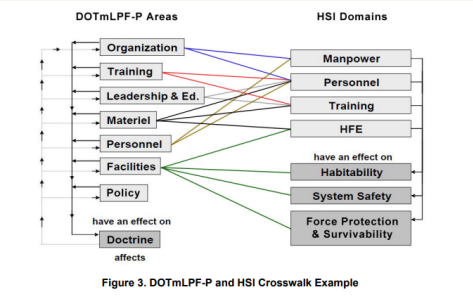


Figure 3. DOTmLPF-P and HSI Crosswalk Example

hsi_guidebook.png

[6–8]

The Institutional Signal (NSF SBIR/STTR)

- Governments request **capability-building** via procurement.
- **Phase I**: proof of concept. **Phase II**: prototype.

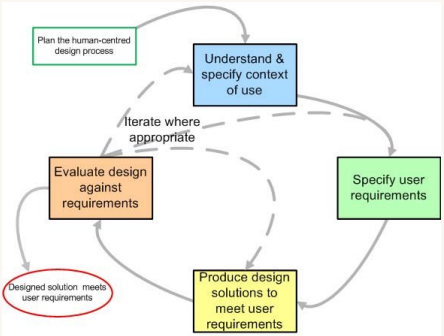
nsf_sbir_phases.png

[9]

Standardized Design Processes

ISO 9241-210

- Human-centered design: explicit understanding of users, tasks, environments.
- Iterative, evaluation-driven process.

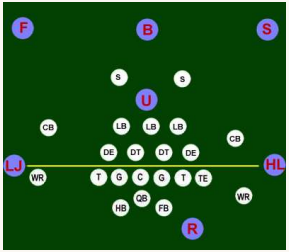

Plan the human-centred design process
Understand & specify context of use
Iterate where appropriate
Evaluate design against requirements
Specify user requirements
Designed solution meets user requirements
Produce design solutions to meet user requirements

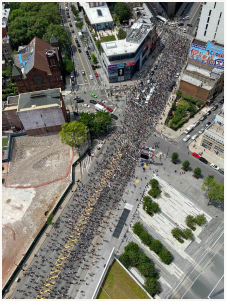
iso_9241_process.jpg

[10]

Choreography Is Everywhere

- Sport, music, protest, dance: **coordinated movement** with rules.





[11–14]

Civic & Military Choreography

af_formation.jpg

bologna_portico.jpg

- **Left:** explicit command (constraint).
- **Right:** implicit design (trust).

[15, 16]

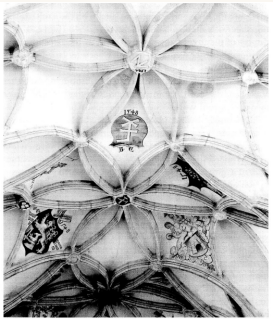
Builders (Contemporary)

- **Civilization rests on coordinated work.**
- Modern building requires complex HSI: safety, blueprints, supply chain.

habitat_builders.jpg

[17]

Attribution and Memory (Masons' Marks)



2.2. A vault at Kutná Hora, Czech Republic. The boss at the top of the picture and the painted shield both display masons' marks [*Author*].

kutna_hora_vault.png

- **Kutná Hora, Czech Republic**.
- Marks preserve **accountability**.

[18]

Citation as Ethics

"If I have seen further, it is by standing on the shoulders of giants."

Isaac Newton (letter to Robert Hooke)

[19]

Signals of the Polis (Standards & Procurement)

- Federal agencies are steered toward **voluntary consensus standards** (where feasible).
- DoD acquisition policy explicitly embeds **Human Systems Integration**.
- Modern readiness extends beyond hardware: **Human Readiness Levels**.

[6, 20–22]

Signals of the Polis: Executive Orders (AI as National Capability)

- AI is framed as **strategic national capacity**, not merely a tech sector.
- The U.S. signals **coordination and acceleration** at the executive level.
- This is a governance move: shaping the **regime** around a general-purpose technology.

[23, 24]

Signals of the Polis: Compute, Power, Permitting

- AI scales through **infrastructure**: data centers, chips, interconnect, and power.
- Policy targets **permitting speed** and **deployment friction**.
- The renaissance has a substrate: **grid, compute, logistics**.

[25, 26]

Signals of the Polis: Quantum Readiness (PQC Migration)

- Quantum pressure arrives first as **cryptography migration**.
- The posture is: **standardize PQC** and **plan/execute migration** across systems.
- Quantum is treated as both **systems risk** and **innovation frontier**.

[27–29]

Signals of the Polis: Talent Pipeline (NSF GRFP + Priorities + Security)

- A renaissance is a **selection system**: who is trained, funded, credentialed.
- NSF GRFP FY26 revises eligibility (e.g., $<$ **1 academic year** in grad school).
- NSF priorities explicitly include **AI** and **Quantum**.
- Research security requirements shape the operating environment for science.

[30–33]

Signals of the Polis: Genesis Mission (AI for Science, Energy, Security)

- State-scale mobilization of national labs + compute toward accelerated discovery.
- Shortening the loop: **idea** $\rightarrow$ **experiment** $\rightarrow$ **deployment**.
- Confirmed emphasis includes **energy systems** as national capability.

[34, 35]

Contemporary Renaissance: System Architects

Systems & Models

- **Karl Friston**: active inference; unifying principles.
- **Michael Levin**: bioelectric patterning as code.
- **HSI practice**: total-system performance (human + machine).

Process & Utility

- Human-centered design (ISO 9241-210) as repeatable method.
- Small business pipelines (SBIR/STTR) as capability engines.

[6, 9, 10, 36, 37]

Contemporary Renaissance: Civic & Cultural Architects

Movement Architects (Giants)

- **Martin Luther King Jr.**: disciplined moral strategy.
- **Malcolm X**: political clarity under constraint.
- **César Chávez**: labor dignity and coalition-building.

Examples (2025 signals)

- **Sara Ziff**: labor protections / organizing.
- **Efrén Olivares**: immigrant rights legal strategy.
- **Daniel Swain**: climate risk communication.

Cultural Architects

- **Jordan Peele**: horror as social diagnostic.
- **Hito Steyerl**: screens, power, and perception.
- **Avery Colvert**: youth-led recovery organizing.
- **María Corina Machado**: democracy advocacy (2025 Nobel Peace Prize).

[38–47]

The Invitation

Where do you fit?

What **utility** does your work provide?

What must be built next?

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